

Title (en)

Method for updating a linear feedback shift register of code generator

Title (de)

Verfahren zum Aktualisieren eines Schieberegisters mit linearer Rückkopplung eines Codegenerators

Title (fr)

Procédé de mise à jour d'un registre à décalage à rebouclage linéaire d'un générateur de code

Publication

EP 1055996 B1 20080514 (EN)

Application

EP 00660080 A 20000503

Priority

FI 991073 A 19990510

Abstract (en)

[origin: EP1055996A2] The invention relates to three different methods for updating a linear feedback shift register of a code generator, and code generators applying the methods. In the basic method a Galois-type linear feedback shift register of a code generator is updated to a target state which is at a known offset from a unit state. The basic method comprises the following: (302) generating a binary offset number illustrating the offset; (304) generating a counter showing the number of bits in the binary offset number; (306) initializing a temporary state with the unit state; (308) iterating as long as the counter value is higher than zero: (310) multiplying the temporary state by itself by applying a Galois Field multiplication; (312) shifting the temporary state one state forward from the current temporary state if the value of the bit shown by the counter is one; and (314) decrementing the counter value by one; (316) in the end, when the counter has reached the value zero, setting the temporary state as the target state. The described basic method is also employed in methods for updating a Galois-type / Fibonacci-type linear feedback shift register of a code generator to a new state which is at a known offset from a current state. <IMAGE>

IPC 8 full level

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CPC (source: EP US)

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Cited by

DE102005005695B4; DE102005006893B4; JP2000332728A; EP2827516A4; DE102005005696A1; DE102005005696B4; DE102005005695A1; US8542664B2

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